

IN THE CLAIMS:

Please amend claims 1, 2, 11 and 12 to read as follows:

1. (Currently Amended) In a method for stabilizing the optical output power (light power) of a diode selected from the group consisting of a light emitting diode and a laser diode, the improvement comprising the step of ~~deriving a measure for~~ maintaining the light power emitted by the diode substantially constant from solely a combination of the forward current and forward voltage of the diode, based on the assumption that at a constant light power the forward voltage is a particular function of the forward current.

2. (Currently Amended) The method as set forth in claim 1, wherein the particular function that ~~determines~~ yields the forward voltage from the forward current of the diode at a constant light power is determined once, through measurements at various temperatures, prior to maintaining the light power emitted by the diode substantially constant ~~and wherein the diode is connected such that the resultant functional correlation between forward current and forward voltage is set solely through electrical means.~~

3. (Currently Amended) The method as set forth in claim 2, wherein the forward voltage is measured via an analog/digital interface using a suitable data processing device, and wherein the forward current is controlled via a digital/analog interface such that the previously determined functional correlation particular function is established between the set forward current and the measured forward voltage.

4. (Currently Amended) The method as set forth in claim 2, wherein it is presumed that the particular function, from which at a constant light power the forward voltage is determined from the forward current, is linear.

5. (Currently Amended) The method as set forth in claim 4, wherein, ~~in the case of a constant forward voltage at a constant light power and an increasing forward current, this correlation~~ the particular function yields a constant (linearly decreasing, linearly increasing) forward voltage for increasing forward current and constant light power, this behavior is established by directly connecting the diode to a constant voltage source.

6. (Currently Amended) The method as set forth in claim 4, wherein, in the case of ~~a linearly decreasing forward voltage at a constant light power and an increasing forward current, this correlation~~ the particular function yields a constant (linearly decreasing, linearly increasing) forward voltage for increasing forward current and constant light power, this behavior is established through the operation of the diode together with a resistor connected in series with a constant voltage source.

7. (Currently Amended) The method as set forth in claim 4, wherein, in the case of ~~a linearly increasing forward voltage at a constant light power and an increasing forward current, this correlation~~ the particular function yields a constant (linearly decreasing, linearly increasing) forward voltage for increasing forward current and constant light power, this behavior is established by directly connecting the diode to a circuit which exhibits the behavior of a constant voltage source connected in series with a resistor of negative resistance.

8. (Currently Amended) A method for stabilizing a plurality of similar light emitting diodes or laser diodes, wherein a first diode is stabilized using the method set forth in claim 3, and wherein the remaining diodes are connected in series and operated such that the current flowing through the first diode also flows through the remaining ones.

9. (Previously Amended) A method for stabilizing a plurality of similar light emitting diodes or laser diodes, wherein a first diode is stabilized using the method set forth in claim 3, and wherein the remaining diodes are operated by one or more voltage sources whose source voltage follows the forward voltage of the first diode.

10. (Previously Amended) A method for stabilizing a plurality of similar light emitting diodes or laser diodes, wherein a first diode is stabilized using the method set forth in claim 3, a first portion of the remaining diodes is connected in series and operated such that current flowing through said first diode also flows through the first portion of the remaining diodes, a second portion of one or more of the remaining diodes is operated by connecting each

to a voltage source whose voltage follows the forward voltage of the first diode and wherein one or more additional portions of the remaining diodes are connected in series and operated such that the currents flowing through the diodes of the second portion flow also through the diodes of the additional portions.

11. (Currently Amended) A method for determining the a particular function that yields a forward voltage of a diode, selected from the group consisting of a light emitting diode and a laser diode, ~~as a function of~~ from the forward diode current at a constant output light power, comprising the steps of: varying the temperature of the diode using a heating or cooling device; determining the emitted light power by means of a photodetector; and maintaining the emitted light power at a constant level by means of a control device and measuring the values of the forward voltage and the forward current of the diode at various temperatures.

12. (Currently Amended) A method for determining the parameters of a particular linear ~~correlation between~~

function that yields the forward voltage from the forward current and the forward voltage of a diode selected from the group consisting of a light emitting diode and a laser diode at a constant light power ~~or for balancing the circuit of a diode which is stabilized using a method according to claim~~ 4, the method comprising tracing the time progression of the light power during a power-up procedure and setting the parameters such that the light power remains constant in spite of the increasing temperature of the diode after power up.

Please add the following new claims:

13. The method as set forth in claim 1, further comprising an initial step of determining the particular function prior to maintaining the light power emitted by the diode substantially constant.

14. The method set forth in claim 1, wherein the diode is connected to an electric circuit that causes the functional relationship between forward current and forward voltage to be the particular function.